

**Statement by  
Eileen Claussen  
Pew Center on Global Climate Change  
Before the Commerce, Science and Transportation Committee  
United States Senate  
July 10, 2001**

Mr. Chairman and members of the committee, thank you for this opportunity to testify on climate change policy. My name is Eileen Claussen, and I am the President of the Pew Center on Global Climate Change.

The Pew Center on Global Climate Change is a non-profit, non-partisan and independent organization dedicated to providing credible information, straight answers and innovative solutions in the effort to address global climate change. Thirty-six major companies in the Pew Center's Business Environmental Leadership Council, most included in the Fortune 500, work with the Center to educate the public on the risks, challenges and solutions to climate change. The BELC companies do not contribute financially to the Center.

Mr. Chairman, I would like to emphasize two points for you today. First, it is our view that the long-term reductions of greenhouse gas emissions needed to truly address global climate change can only be achieved through a comprehensive and binding strategy. Second, we believe the steps we take to reduce greenhouse gas emissions -- especially those promoting the development and use of energy efficient technologies -- will help U.S. industry compete in the international marketplace.

In assessing how the United States can or should proceed to reduce greenhouse gas emissions domestically and, in turn, internationally, it is important to recognize certain defining characteristics of the climate challenge, and what they imply for the effort required to meet it. First, climate change is truly a global challenge: Averting the worst consequences of global warming ultimately requires action by all major emitting nations.

Second, it is a long-term challenge. Reducing emissions to the levels necessary to prevent serious climate disruption will take many decades because it essentially requires a new industrial revolution—one enabling the broad introduction of low-carbon technologies to power a growing global economy.

Much as some would like to believe otherwise, it will be extraordinary difficult if not impossible to muster the kind of global, sustained effort that is needed without the force of legally binding commitments. There is little incentive for any country—or any company—to undertake real action unless, ultimately, all do, and are in some manner held accountable. Markets, of course, will be instrumental in mobilizing the necessary

resources and know-how; market-based strategies such as emissions trading will also help deliver emissions reductions at the lowest possible cost. But markets can move us in the right direction only if they are given the right signals. In the United States, those signals have been neither fully given nor fully accepted.

So what would constitute an effective domestic program to reduce greenhouse gas emissions? To date, efforts to reduce U.S. emissions have been limited almost exclusively to voluntary activities at the federal, state, local, and corporate level. Spurred on by the United Nations Framework Convention on Climate Change, to which the United States is a party, a number of these efforts have resulted in significant emission reductions. For example some companies on our Business Environmental Leadership Council have cut emissions by 10 percent or more from 1990 levels. DuPont has cut its greenhouse gas emissions by 45 percent from 1990 levels. Shell is on track to hit 10 percent by next year (2002).

However, while technology has decreased the energy intensity of products and processes over the last 50 years, the efficiency has been outpaced by increased demand driven by economic expansion, population growth, and changing consumer preferences. In the aggregate, voluntary efforts have not ended overall growth in U.S. emissions. Indeed, U.S. emissions have grown approximately 12 percent over the past decade. The lesson here is clear: voluntary programs can make a contribution, but will not, on their own, be enough.

What will? To effectively address climate change, we need to lower carbon intensity, become more energy efficient, promote carbon sequestration, and find ways to limit emissions of non-CO<sub>2</sub> gases. This will require fundamentally new technologies, as well as dramatic improvements in existing ones. New, less carbon-intensive ways of producing, distributing and using energy will be essential. The redesign of industrial processes, consumer products and agricultural technologies and practices will also be critical. These changes can be introduced over decades as we turn over our existing capital stocks and establish new infrastructure. But we must begin making investments, building institutions, and implementing policies now.

Three decades of experience fighting pollution in the United States have taught us a great deal about what works best. In general, the most cost-effective approaches allow emitters flexibility to decide how best to meet a given, binding emissions limit; provide early direction so targets can be anticipated and factored into major capital and investment decisions; and employ market mechanisms, such as emissions trading, to achieve reductions where they cost least. To ease the transition from established ways of doing business, targets should be realistic and achievable. What is important is that they be strong enough to spur real action and to encourage investment in development of the technology and infrastructure needed to achieve the long-term objective.

A good first step is to get our house in order by immediately requiring accurate measurement, tracking and reporting of greenhouse gas emissions. Current efforts lack rigorous reporting standards and verification requirements. Public disclosure of the

reported data, similar to what is required for certain pollutants under the federal Toxic Release Inventory (TRI) program, would encourage companies to hunt for ways to reduce their greenhouse emissions.

There are other ways we can and should spur companies to act ahead of any mandatory requirements. One is for the government to enter into voluntary enforceable agreements with companies or sectors willing to commit to significant reductions—either in process emissions, or those from the use of products they make (e.g. automobiles or washing machines). In exchange for its commitment to cut emissions, a company or sector should be guaranteed that it would not be bound by subsequent mandates for greenhouse gas controls over the same time period. A similar approach could encourage companies, particularly in the electric utility sector, to cut carbon emissions as they undertake air pollution reductions required by existing law—a more cost-effective way to achieve multiple environmental objectives.

While such efforts can help get the United States on track, the long-term emission reductions needed can be achieved only with a far more comprehensive—and binding—strategy. Alternative approaches should be closely studied, and the results publicly debated. But much of the analysis thus far suggests that a “cap-and-trade” system—which sets an overall cap on emissions and establishes a market in carbon credits—can provide the private sector the flexibility and incentive to achieve emission reductions at the least possible cost. As yet, we do not believe that we have economic models that can accurately predict the long-term costs and benefits of a serious climate strategy. However, the best analyses to date suggest that, with the use of rational strategies, the costs are reasonable, particularly when weighed against the serious and significant costs of not acting.

Also, as I mentioned earlier, there will be important side benefits to many of these measures. The steps we take to reduce greenhouse gas emissions will help U.S. companies compete in the international marketplace. Improving energy efficiency for example, makes good business sense, as well as good economic policy.

Efficiency can mean new kinds of light bulbs that provide better light, waste less energy, and save money over their lifetimes. It can mean new industrial process designs that use less energy, produce more valuable products and produce less waste. It can mean superconductors that dramatically cut electricity transmission losses. Efficiency is not just a short-term solution; it is also a long-term solution. Both the electricity system and the automobile waste most of the energy they produce. In fact, we waste so much energy that the potential for long-term savings is huge.

The California energy crisis has focused all our attention on the critical role that energy plays in U.S. competitiveness. Annual U.S. economy-wide energy expenditures – approximately \$567 billion in 1997 -- are comparable to the total annual federal government consumption and investment expenditures (\$538.7 billion in 1997; note that this excludes transfer payments, for example, under entitlement programs). Our increasing dependence on imported oil--we now import over half of the oil we use--has a

major impact on our balance of payments, and makes us vulnerable to price volatility in the world oil market. Thus improving energy efficiency means reducing energy bills, freeing up our nation's resources for other activities, and increasing energy security.

The U.S. electricity system wastes two-thirds of the energy it produces--in the form of waste heat at power plants, and energy losses from power lines. Available combined heat and power technologies could recapture most of the power plant losses in a usable form. Distributed generation (power plants located near the point of electricity use) and new kinds of conductors (and ultimately superconductors) could dramatically reduce the distribution and transmission losses that now waste 9 percent of gross electric generation.

Similarly, cars and trucks waste 85% of the energy in each gallon of gasoline. Thus the potential to improve fuel economy with advanced technologies is huge. For example, new materials can reduce vehicle mass and thus the energy required for acceleration. Regenerative braking can recapture energy lost during deceleration. Advanced tires can cut rolling resistance.

In key energy-intensive or import-sensitive sectors, energy costs can make or break companies. Alcoa, for example, has reduced the electricity required to produce a ton of aluminum by 20% over the last 20 years. But almost all companies can benefit from aggressive energy efficiency measures; and many of the best companies already have. IBM saved \$14.8 million in energy bills in the year 2000 alone. Despite the association of energy conservation with the so-called "soft" path, it is striking the extent to which hard-driving, profitable companies focus on high-tech lighting upgrades, "smart" systems that precisely match energy availability to energy needs, and new motors.

But energy efficiency is more than a cost-reduction strategy, it is also a business opportunity, both here and abroad. Companies like Whirlpool and Maytag focus on producing high-efficiency consumer appliances. Toyota recently introduced the Prius, a high efficiency hybrid electric vehicle. Two billion people in the world do not yet have access to electricity; twice as many do not have access to cars (let alone SUVs). Efficiently meeting the world's exploding demand for power and transportation services is a key business strategy for many companies. Global investment in energy between 1990 and 2020 will total some \$30 trillion in 1992 dollars. The number of motor vehicles worldwide is expected to be 816 million by 2010, with enormous growth expected in developing countries where vehicle ownership rates are now quite low. The lure of this market has led ABB, for example, to focus on alternative energy and small-scale distributed power generation, including wind farms, fuel cells, and combined heat and power plants using miniature gas turbines. United Technologies' International Fuel Cells subsidiary produces the world's only commercial fuel cell power plants.

In closing, Mr. Chairman, as we address climate change, we will learn as a nation what businesses are already finding--that opportunities and co-benefits abound, that meeting this challenge will not bankrupt our economy, but will make it more competitive. And the sooner we move to address it, the better it will be for both the environment and our economy. Thank you.